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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/534,814	03/22/2000	Duane Charles Gates	2328-023 RI	9066

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EXAMINER

PASCHALL, MARK H

ART UNIT PAPER NUMBER

3742

DATE MAILED: 02/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/534,814

Applicant(s)

GATES, DUANE CHARLES

Examiner

Mark H Paschall

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-38 is/are allowed.
- 6) ☒ Claim(s) 39-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: PTO/58/96

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: \_\_\_\_\_

Application No./Patent No.: \_\_\_\_\_ Filed/Issue Date: \_\_\_\_\_

Entitled: \_\_\_\_\_

\_\_\_\_\_, a \_\_\_\_\_,  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☐ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by, percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

- ☐ Copies of assignments or other documents in the chain of title are attached.  
**[NOTE:** A separate copy (*i.e.*, the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed or printed name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

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***Reissue Applications***

Claims 39-~~56~~<sup>55</sup> are rejected under 35 U.S.C. 251 as being based upon new matter added to the patent for which reissue is sought. The added material which is not supported by the prior patent is as follows:

In claim 39 the new matter is listed in lines 7-13 and comprises describing the coil as having interior, intermediate and peripheral portions and also describing different magnetic fluxes for these different coil portions. Note that the original disclosure and claims are silent as to any discussion of magnetic flux. These same limitations are likewise found in claim 45 on lines 10-16 , and in claim 51 on lines 10-17, claim 54 on lines 8-15. In claim s 40, 46- 50 new matter is disclosed as the new limitations setting forth that the interior coil comprises plural radially and circumferentially extending turns , with the intermediate portion not including a complete turn . Note that the original disclosure is drawn to a coil having a first and a second segment in series, not the three segments now claimed. In claims 51 and 56 the new matter listed respectively in lines 15-16 and lines 14-15 comprises the term , “the lead having at least a portion that is straight “.

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to

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make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 39-58 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. New matter is set forth in the above claims. The new matter comprises inclusion of a coil comprised of three segments, an interior portion, an intermediate portion and a peripheral portion. The original specification described only a coil having two segments in series. The new claims also set forth language setting forth variation of the magnetic flux relative to the coil segments. However, the original disclosure makes no mention of the term magnetic flux, but mentions only variation of the coil current to effect a plasma having uniform plasma characteristics.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 39-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hama et al '159. Note that Hama et al '159 teaches more current flow the peripheral portion of the coil than to the center portion of the coil. It is obvious that this effect results in a more intense magnetic flux at the peripheral portion of the plasma chamber , as claimed.

5. Applicant is required to submit a 37 CFR 3.73(b) statement. This statement replaces the title report in applications filed on or after September 24, 1992. Since this application was filed on March 22, 2000, it must comply with the provisions of 37 CFR 3.73 (b). Applicant is required to complete and submit the enclosed form for this statement.

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### Response to Applicants arguments

Concerning the rejection and objection re new matter both the rejection and objection stands.

Applicant advances that in the parent that the present reissue was based on was used by another Examiner as a reference to anticipate claims in another application. What another Examiner did in another office action does not influence the present new matter issue. As stated in the instant office action the new matter pointed out is not present in the parent of the present reissue.

Applicant is once again requested to point out word and line in the parent just where the basis for the new matter exists, in the forthcoming response. Applicant is also requested to point out in the specification, where the basis for the new matter limitations set forth in new claims 57 and 58 lies.

Applicant argues that these limitations and their effects are inherent limitations. However these limitations are not considered inherent. Applicants specification merely mentions that the coil configurations lead to more spatial uniformity in the etching. No mention whatsoever is made of variation of the electric fields in the etching process. Applicant has failed to show where the basis for these limitations lies in the original specification. The coil turns variation could be used to vary the magnetic field, and vary the magnetic field. The latter variation is a function of the coil orientation. Hama et al teach variation of the electric field. For these reasons, Applicants claim

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that these limitations are inherent are not persuasive. It should be noted that the electromagnetic fields generated could be varied by the distance of the individual coil segments relative to the chamber bottom and relative to each other.

As per Applicants remarks , the rejection of the claims as being broadened via reissue has been removed , and the claims are rejected under the recapture doctrine as set forth above. Note that the recapture doctrine is not bound by the 2 year filing rule. Also the rejection based on recapture has been dropped in view of Applicant's response.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. H. Paschall whose telephone number is (703) 308-1642.

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February 24, 2003